current change order along with the date that the change order is submitted. This module will

then calculate the total amounts of the previous change orders based on equation 6 and

previous time extensions based on equation 8. Further, the module will also calculate the

revised contract price and revised schedule using equations 7 and 9.

5   (Equation 6) APCO= Σ(Previous Contract Change Orders)

(Equation 7) Revised Contract Price = Original Contract Price + APCO + Current CO

Amount

(Equation 8) PTE = Σ(Previous Time Extensions)

(Equation 9) Revised Schedule = Original Contract Duration + PTE + Current CO

10   Extension

In addition, a search module 109 is provided to assist users in locating documents

when necessary.

The main function of this module is to determine the project status based on the

project's key indicators. This module is for output there will be no inputs. This module will

15   be linked to the project information table, contract information table, and the estimate tables

for each project. This module will query the latest information from these tables to determine

if the project is ahead of time, on time, or behind. This will done by looking at the

percentage of work completed against actual days used to complete the work using equation

10.

20   (Equation 10) %WKComp = Σ(Item Cumulative Totals) / Revised Contract Price

*100

This module will create an summary output table which will include the project name,

gfs number, contract name, contract number, contractor, contract date, contract amount,

contract days, work complete, number of days used, amount paid, percent of total amount

paid (equation 11), and lagging indicator (Equation 12).

(Equation 11) % By Time = Days Used / Revised Schedule * 100

(Equation 12) % Lagging = %WKComp - % By Time

The main function of this Schedule Module module is to track the schedule for each

bid tabulation item. The user interface controls the start and finish dated for each item. This

module provides an interface to MS Project™ that automatically launches, transmits the item

description, start date, and finish date to display the project schedule.

The main function of this Send/Receive Data Module module is to control the Daily

Field Journal data from the Master Database. This module allows the inspectors using

Inspect-IT and the estimators using Construct-IT to manage these Daily Field Journal

Updates. Before activating the Send/Receive Data Module, the user will need to dial-up or

connect to the project database server. The user selects the project and the date for which

these updates are to be performed, and select the appropriate Send or Receive button for the

transition required. .

The main function of this module is to control user access and update privileges to the

content of the Master Database. This module assumes four (4) user types: Inspector,

Estimator, Project Manager, and Database Administrator. In addition, this module allows the

Database Administrator to configure the users privileges based on a project by project and

department by department basis. In general, the Database Administrator would configure the

system to allow the following privileges:

Inspector: Daily Field Journal (Read/Write)

Estimator: Daily Field Journal (Read) + Monthly Estimate Report Module

(Read/Write)

Project Manager: Main Modules (Read/Write/Update)

Database Administrator: (Full Control)

There will be a help button in the main window. The help with give a complete

overview of how the program works and how all the modules are interrelated. Moreover, the

5   help will consist of descriptions of the different functions of the software package. The help

will also give a description of each button and its purpose. In addition to the help button that

appears in the main window, help on the individual modules will be available. The help on

the individual modules will describe the input fields for each module along with the function

and use of the module.

10   A search function will allow the user to search for a particular item in the database.

The search will consist of selecting a project or contract and then searching for a particular

item associated with that particular contract or project. The search will have to be linked to

both the project and contract tables through their project number and contract number to

allow the user to find a particular data item in the database.

15   Fig. 9 illustrates an exemplary handheld computer system for collecting and managing

construction data. The computer system is preferably housed in a small, rectangular portable

enclosure. Referring now to Figure 9, a general purpose architecture for entering information

into the data management by writing or speaking to the computer system is illustrated. In

Figure 9, a processor 20 or central processing unit (CPU) provides the processing capability

20   for the sketching system of the present invention. The processor 20 can be a reduced

instruction set computer (RISC) processor or a complex instruction set computer (CISC)

processor. Preferably, the processor 20 is a low power CPU such as the MC68328V

DragonBall device available from Motorola Inc.